

REMARKS

In the Office Action dated January 30, 2003, claims 17 and 31 stand objected to since the claims are not present in the application. Claims 1-6, 12-16, 18-24, 27-30 and 32-34 stand rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 4,403,058 to Dohi et al. (hereinafter "Dohi") in view of U.S. Patent No. 5,424,355 to Uemae et al. (hereinafter "Uemae"). Claims 7-8 also stand rejected 35 U.S.C. §103(a) as obvious over Dohi in view of Uemae and in further view of Applicants' Admitted Prior Art (hereinafter "APAA") and U.S. Patent No. 4,403,058 to Damico (hereinafter "Damico"). Claims 9-11 stand rejected under 35 U.S.C. §103(a) as obvious over Dohi in view of Uemae and in further view of Briggs et al. However, Applicants note that a patent number for the Briggs et al. reference was not provided in the Office Action. Lastly, claims 25-26 stands rejected under 35 U.S.C. §103(a) as obvious over Dohi in view of Uemae and in further view of U.S. Patent No. 6,086,795 to Hatton (hereinafter "Hatton").

In response to the Office Action, Applicants have amended claims 1, 3 and 16, 18-27, 29-30 and 32-34, cancelled claims 2, 15 and 28, and submit herewith a Declaration under 37 CFR §1.132 by Donald Gosiewski, which when considered with the remarks set forth below are deemed to place the application in condition for allowance. Support for the amendment of claims 1 and 29-30 (newly numbered) is found in the specification at page 3, lines 2-4; page 6, line 31-page 7, line 3; page 14, lines 18-21; and page 25, line 1-17, and in cancelled 2, 15 and 28. No new matter is being added. Reconsideration of the application is respectfully requested.

Objection to Claims 17 and 31

As noted above, claims 17 and 31 stand objected to since the claims do not appear in the application. The Examiner indicated that correction of the claim numbering is required.

In response, Applicants have amended the claims to renumber claims 18-30 and 32-34 as claims 17-29 and 30-32, respectively. Withdrawal of the rejection is respectfully requested.

Rejections based on Dohi et al.

Claims 1-32 (as presently numbered) stand rejected as obvious over Dohi in view of the various secondary references noted above. Basically, it is the Examiner's contention that all of the elements of the claimed invention are taught or suggested by the cited prior art .

In response, Applicants submit that the above-cited prior art does not render the claims prima facie obvious. As set forth in Section 2142 of the Manual of Patent Examining Procedure (M.P.E.P.), a prima facie case of obviousness requires three basic criteria to be met:

First, there must be some suggestion or motivation either in the references themselves or in the knowledge generally available to one of ordinary skilled in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined), must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must be found in the prior art, and not on the applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1981)(emphasis added).

First, Applicants submit that there is no motivation or suggestion to combine Uemae with Dohi in an attempt to achieve the claimed invention. While Dohi is directed to acrylate-based or methacrylate-based adhesives, Uemae is not. Uemae is directed to aqueous-coating compositions and is not relevant to structural adhesives and much less to acrylate-based and methacrylate-based structural adhesives as presently claimed. In addition, Applicants submit that the assertion at page 4 of the Office Action of Uemae supposedly disclosing zinc molybdate being useful in adhesive compositions to prevent rust is erroneous. Applicants have reviewed Uemae and the only portion of the disclosure that mentions adhesives is col. 12, lines 39-44,

which recites “[a]s the urethane emulsion polymer particles (C) which can suitably be compounded into the aqueous coating composition of this invention, there can be used urethane polymer emulsions known per se in the coating field, adhesive field, etc.” Therefore, there is no motivation or suggestion to use Uemae as a secondary reference to Dohi since Uemae is clearly not relevant to adhesives as alleged in the Office Action. As a result, all of the rejections based on Dohi in view of Uemae should be withdrawn.

Second, the above-cited prior art does not render the pending claims prima facie obvious since the prior art neither teaches nor suggests the unexpected improved onset of handling strength provided by the claimed invention. As the Examiner will note, independent claims 1 and 29-30 have been amended to recite that the adhesive part with the less than 3 weight percent of a salt of an ethylenically unsaturated carboxylic acid provides improved handling onset to the adhesive composition. Applicants have unexpectedly found that when the amount of the ethylenically unsaturated carboxylic acid salt used to prepare the adhesive (e.g., a metal salt of acrylic or methacrylic acid) is less than 3 weight percent a faster onset of handling strength (i.e., a decreased fixture time) occurs as compared to an adhesive that is prepared with greater than 3 weight percent. *See* specification at page 25, lines 1-17; *see also* Table 3 and Fig. 1. This was considered surprising because one skilled in the art would normally expect that decreasing amounts of ethylenically unsaturated carboxylic acid salt would result in increased times for the onset of handling strength. *See* specification at page 25, lines 14-17.

For example, Applicants point the Examiner to Fig. 1 that shows the development of strength for adhesive compositions evaluated using ASTM D1144. Sample 1 contained 3.15 weight percent zinc dimethacrylate (i.e., ethylenically unsaturated carboxylic acid salt) in the adhesive part and is representative of the prior art. As a result, sample 1 is not encompassed by

independent claims 1 and 29-30. Samples 2 and 3 contained 2.5 and 1 weight percent zinc dimethacrylate, respectively, in their adhesive parts and are encompassed by independent claims 1 and 29-30. Sample 8 contained no zinc dimethacrylate in its adhesive part and is not encompassed by independent claims 1 and 29-30. As the Examiner will clearly see from Fig. 1, sample 8 exhibited the longest onset of strength indicating that the ethylenically unsaturated carboxylic acid salt is needed for quicker onset. This is especially evident when compared to sample 1 that exhibited a quicker onset of strength than sample 8. However, samples 2 and 3 which both contained less ethylenically unsaturated carboxylic acid salt than sample 1 exhibited even quicker onsets of handling strength. Such an improvement where none is expected is indicative of the non-obviousness of the claimed invention.

Moreover, the above-cited prior art in no way provides any indication of the unexpected results achieved by the present invention. As the Examiner correctly notes, Dohi discloses methacrylate metal salts at col. 2, lines 42-53 in addition to metal salts of acrylates and acetates, which are used as a stabilizer. However, Dohi teaches an extreme range of concentrations ranging from 0.01 to 20 weight percent. *See* col. 2, lines 50-53. For example, Dohi discloses in Table 1 that "sample 7" for "system I" contained 6.44 weight percent zinc dimethacrylate (col. 4, line 62), which is significantly greater than the 3.15 weight percent contained in comparative sample 1 discussed above. Thus, Dohi and the other references do not teach or suggest the improved onset of handling strength achieved by the present invention. Withdrawal of the above-rejections is once again respectfully requested.

Finally, Applicants submit herewith a Declaration under Declaration under 37 CFR §1.132 by Mr. Donald Gosiewski, a co-inventor of the claimed invention. In his Declaration Mr. Gosiewski attests to an experiment comparing the adhesive compositions of the

present invention and the adhesive compositions of Dohi. The adhesives were evaluated for 0.03 inch gap bond durability. The data clearly shows that the inventive adhesives consistently outperformed the adhesive of Dohi. Moreover, Dohi was found to provide results no better than comparative sample 1. Therefore, Dohi clearly does not teach or suggest Applicants' claimed invention.

In view of the above amendments and remarks, Applicants respectfully submit that the application is in condition for allowance which action is earnestly solicited. If for any reason the application is not deemed in condition for allowance, the Examiner is respectfully requested to contact the undersigned attorney so that additional amendments may be entered as necessary.

Applicants do not believe that any additional fees are due other than the requisite fee for the three (3) month extension of time. However, if any additional fees are due, please charge such sums to our Deposit Account 50-1145.

Respectfully submitted,

  
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